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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/072,818

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Andrea Graziani

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EXAMINER

HANEY, MATTHEW J

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/072,818	<b>Applicant(s)</b> GRAZIANI ET AL.	
	<b>Examiner</b> Matthew Haney	<b>Art Unit</b> 2613	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-16, 18-28 and 30-36 is/are rejected.
- 7) ☒ Claim(s) 5, 17 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____   | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: The specification fails to fully describe the claimed subject matter for claim 5.

Appropriate correction is required.

### ***Allowable Subject Matter***

2. Claims 5, 17, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 11-16, 23-28, and 35-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (US 5,926,573).

As for claims 1, 13, and 25, Kim teaches of distinguishing, in said input bitstream, non-affecting portions that substantially do not affect variation in bitrate and affecting portions that substantially do affect variation in bitrate (Note: Figure 1 shows the bitstream being broken into header information (non-affecting) and DCT coefficients

(affecting portion), Column 5, Lines 16-33); when said syntax is to be modified between said input bitstream and said output bitstream, subjecting said non-affecting portions of said input bitstream to translation of said syntax into the syntax of said output bitstream and transferring said non-affecting portions subjected to syntax translation to said output bitstream (Note: Figure 1 shows the seq\_header and Gop\_header (and the other syntax) being introduced to converters (Reference Number 610) that changes their content, Column 5, Lines 34-67); when said resolution is to be modified between said input bitstream and said output bitstream, subjecting said non-affecting portions of said input bitstream to translation of said resolution into the resolution of said output bitstream and transferring said non-affecting portions subjected to the resolution translation to said output bitstream (Column 5, Lines 44-67); transferring said affecting portions from said input bitstream to said output bitstream in substantial absence of processing operations when said resolution is left unaltered between said input bitstream and said output bitstream, and when said resolution is modified between said input bitstream and said output bitstream, subjecting said affecting portions of said input bitstream to a filtering in the domain of the discrete cosine transform, then transferring said affecting portions subjected to filtering in the domain of the discrete cosine transform to said output bitstream (Note: see Figure 1 and Column 5, Lines 34-43).

As for claims 2, 14, and 26, Kim teaches of non-affecting portions and said affecting portions of said input bitstream are distinguished by parsing headers of said input bitstream (Column 5, Lines 16-32).

As for claims 3, 15, and 27, Kim teaches of an operation of carrying out a scaling of a motion field to enable association to pixel macroblocks having a resolution corresponding to the modified resolution of said output bitstream when said resolution is to be modified between said input bitstream and said output bitstream (Column 6, Lines 65-67 and Column 7, Lines 1-11).

As for claims 4, 16, and 28, Kim teaches of scaling of the motion field includes an operation of applying to motion vectors associated with said input bitstream a transformation that correlates the motion vectors to a given number of motion vectors associated with at least one of the macroblocks chosen in the set made up of: macroblocks that are to be merged into a new macroblock; and macroblocks that surround the ones that are to be merged into the new macroblock (Note: Figure 2 shows a motion vector decision and the text describes in detail how the motion parameters for the converted macroblocks is determined, Column 7, Lines 58 through Column 10, Lines 18).

As for claims 11, 23, and 35, Kim teaches of macroblocks with modified resolution undergo VLC coding before being transferred to said output bitstream (Figure 1 (Reference Number 660)).

As for claims 12, 24, and 36, Kim teaches of an operation of selectively varying a quantization-scaling code between said input bitstream and said output bitstream (Column 9, Lines 12-14).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 18, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 5,926,573).

As for claims 6, 18, and 30, most of the limitations of the claim are contained in the above rejection of claims 1, 13, and 25. Kim does teach of filtering operation in the domain of the discrete cosine transform comprises the operations of: storing a given number of macroblocks aligned on one and the same line (Column 7, Lines 34-50). Kim does not explicitly teach of multiplying said macroblocks by at least one matrix with a scaled definition factor, however, it would have been obvious to one of ordinary skill in the art at the time of the invention to take the macroblock numbers which are being stored in matrix form (as taught by Kim) and multiply them by another matrix which contains numbers (i.e. scaled definition factor) which can eliminate the high or low frequency components (Kim teaches that you can filter out the high frequencies in some cases or do nothing in others, which is easily done with matrix). Since the numbers are stored in matrix form an efficient way to eliminate the unwanted frequencies would be to multiply it by another matrix. This method is clearly obvious to one of ordinary skill in art. One of ordinary skill in the art would have been motivated to do so in order to be able to pick and choose which specific frequencies they wanted eliminated and to do so in an efficient manner. Official Notice

Claims 7-9, 19-21, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 5,926,573) in view of Sita (US 6,539,120).

As for claims 7-9, 19-21, and 31-33, most of the limitations of the claims are contained in the above rejection of claims 6, 18, and 30. Kim does not teach of the operation of storing either/both a given number of macroblocks aligned on one and the same horizontal line and a given number of macroblocks aligned on one and the same vertical line, so that said definition factor is scaled either/both in the horizontal direction and in the vertical direction, however, Sita does (Column 17, Lines 9-23). It would have been obvious to one of ordinary skill in the art at the time of the invention to take a horizontal or vertical filter and apply it to the DCT in order to allow for easier computational mathematics as apposed to doing so in the frequency domain (a shift as apposed to a convolution).

As for claims 10, 22, and 34, Kim teaches of given number of macroblocks comprises at least three macroblocks (Column 7, Lines 39-50).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zhang (US 6,181,711) teaches of separating into affecting and non-affecting and changing the syntax and resolution separately from the bit-rate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Haney whose telephone number is 703-305-

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4915. The examiner can normally be reached on M-Th (5:30-3:00), Every Other Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew Haney  
Examiner  
Art Unit 2613

mjh

  
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